

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.					
1. REPORT DATE (DD-MM-YYYY) 14-02-2005		2. REPORT TYPE FINAL		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE Misfire: An Operational Critique of OIF Targeting Strategy				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Major John D. Martin, USAF Paper Advisor: Colonel David Dellavolpe, USAF				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Joint Military Operations Department Naval War College 686 Cushing Road Newport, RI 02841-1207				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Distribution Statement A: Approved for public release; Distribution is unlimited.					
13. SUPPLEMENTARY NOTES A paper submitted to the faculty of the NWC in partial satisfaction of the requirements of the JMO Department. The contents of this paper reflect my own personal views and are not necessarily endorsed by the NWC or the Department of the Navy.					
14. ABSTRACT Joint force commanders (JFCs) utilized improper weapons during the major combat operations phase of Operation Iraqi Freedom (OIF) to accomplish all strategic objectives. CENTCOM's dependency on PGMs appeared to have decisive effects during the campaign of "Shock and Awe." However, while PGMs were instrumental in accomplishing the primary national-strategic objective of regime removal in OIF, targeting concentrated exclusively on leadership, command and control (C2) and military equipment. Such a strategy enjoyed near-term success but failed to achieve the long-term ends of a politically stable Iraq. Rather than feeling soundly and convincingly beaten, Baathist leaders and Army members merely retired from the battlespace to live to fight another day. Their efforts to inculcate insurgency groups, particularly within the Sunni populace, created a well-spring of discontent. That discontent bred the terrorist factions with which the American military is currently embroiled. Less reliance on PGMs and a greater balance of coercive and destructive methods during OIF combat operations would have constituted an effects-based targeting strategy that would have satisfied all national-strategic objectives and would have established a smoother transition to stability operations.					
15. SUBJECT TERMS Operation Iraqi Freedom, PGM, Coercion, Denial, Attrition					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES 27	19a. NAME OF RESPONSIBLE PERSON Chairman, JMO Dept
a. REPORT UNCLASSIFIED	b. ABSTRACT UNCLASSIFIED	c. THIS PAGE UNCLASSIFIED			19b. TELEPHONE NUMBER (include area code) 401-841-3556

**NAVAL WAR COLLEGE
Newport, RI**

**Misfire: An Operational Critique of Operation Iraqi Freedom (OIF) Targeting
Strategy**

By

**John D. Martin
Major, USAF**

**A paper submitted to the faculty of the Naval War College in partial satisfaction
of the requirements of the Department of Joint Military Operations.**

**The contents of this paper reflect my own personal views and are not necessarily
endorsed by the Naval War College or the Department of the Navy.**

Signature: _____

(14 February, 2005)

David Dellavolpe, Colonel, Advisor

Abstract

Joint force commanders (JFCs) utilized improper weapons during the major combat operations phase of Operation Iraqi Freedom (OIF) to accomplish all strategic objectives. CENTCOM's dependency on PGMs appeared to have decisive effects during the campaign of "Shock and Awe." However, while PGMs were instrumental in accomplishing the primary national-strategic objective of regime removal in OIF, targeting concentrated exclusively on leadership, command and control (C2) and military equipment. Such a strategy enjoyed near-term success but failed to achieve the long-term ends of a politically stable Iraq. Rather than feeling soundly and convincingly beaten, Baathist leaders and Army members merely retired from the battlespace to live to fight another day. Their efforts to inculcate insurgency groups, particularly within the Sunni populace, created a well-spring of discontent. That discontent bred the terrorist factions with which the American military is currently embroiled. Less reliance on PGMs and a greater balance of coercive and destructive methods during OIF combat operations would have constituted an effects-based targeting strategy that would have satisfied all national-strategic objectives and would have established a smoother transition to stability operations.

Table of Contents

Introduction.....	1
Objectives and Targeting Strategies.....	2
Shock and Awe: Precision Primacy.....	5
Operation Iraqi Freedom (OIF) Analysis.....	8
In Praise of Attrition.....	11
Recommendations.....	13
Conclusion.....	16
Bibliography.....	22

List of Illustrations

Figure	Title	Page
1.	PGM Usage 1991-2003.....	18
2.	OIF CFACC Apportioned Targeting (Planning Phase).....	18
3.	OIF CFACC Apportioned Targeting (Execution Phase).....	19
4.	Iraqi OIF Order of Battle Losses.....	19

INTRODUCTION

An old axiom adroitly observes, “If it bleeds, it leads.” A score of months since the declared end of major combat operations in Iraq, international headlines continue to bleed red. U.S. Central Command (CENTCOM) Commander General John Abizaid is challenged with a burgeoning insurgency which some estimates number as high as 30,000.¹ One critic powerfully asserts that, “Clearly, the scope of the mission objectives for Operation Iraqi Freedom extends well beyond what U.S. and coalition military forces can achieve.”² Certainly Operation Iraqi Freedom (OIF) operational lessons may be gleaned by joint warfighters. In particular, the weapons used for targeting effects during OIF combat operations failed to match all of the desired ends.

Joint force commanders (JFCs) utilized improper weapons during the major combat operations phase of OIF to accomplish all strategic objectives. CENTCOM’s dependency on precision-guided munitions (PGMs) appeared to have decisive effects during the campaign of “Shock and Awe.” However, while PGMs were instrumental in accomplishing the primary national-strategic objective of regime removal in OIF, targeting concentrated exclusively on leadership, command and control (C2) and military equipment. Such a strategy enjoyed near-term success but failed to achieve the long-term ends of a politically stable Iraq. Rather than feeling soundly and convincingly beaten, Baathist leaders and Army members merely retired from the battlespace to live to fight another day. Their efforts to inculcate insurgency groups, particularly within the Sunni populace, created a well-spring of discontent. That discontent bred the terrorist factions with which the American military is currently embroiled. Less reliance on PGMs and a greater balance of coercive and destructive methods during OIF major combat operations would have constituted an effects-based

targeting strategy that would have satisfied all national-strategic objectives and would have established a smoother transition to stability operations.

OBJECTIVES & TARGETING STRATEGIES

Secretary of Defense Donald Rumsfeld announced in March of 2003 the eight national-strategic objectives of OIF. While the first and primary objective was the regime removal of Saddam Hussein, the last of the eight objectives was loosely phrased, "...the coalition will create the conditions for Iraq's rapid transition to a representative government 'that is not a threat to its neighbors.'"³ This objective implicitly indicated an Iraq which, having shed the yoke of tyranny, would peacefully transition to democracy and promote regional balance. However operational commanders did not target to meet all post-war objectives thoroughly. The last objective reflected a traditional American tendency to dismiss or marginalize conflict termination. Critics assert that national and operational miscues led to the conflict termination issues encountered in Iraq today. One such critic suggested two vital mistakes:

"One is the failure at the highest policy levels to give conflict termination the proper priority. The second is the failure by the U.S. military to properly recognize the importance of making conflict termination and the transition to nation-building a critical part of its doctrine and planning for asymmetric warfare."⁴

This second observation is a salient point for future JFCs to recognize and apply. JFCs need to be able to apply the appropriate targeting strategy to accomplish not just one objective but all objectives. Several targeting strategies were blended into the OIF targeting strategy of "Shock and Awe" which will be discussed later. Two strategy theorists who influenced "Shock and Awe" were John Boyd and John Warden.

John Boyd theorized, "...all rational human decision-making as occurring in a cycle called the 'OODA (Observe, Orient, Decide, Act) Loop'..."⁵ He further argued that, "...in

conflict, the winner will be the combatant who steps more quickly through this loop, thus moving and acting within an adversary's decision cycle."⁶ A second correlating targeting theory is John Warden's "concentric rings" strategy. His theory maintained that the enemy is a "system" of concentric rings, each reflecting a nested center of gravity. The rings, in order of importance, are leadership, organic essentials, infrastructure, population and fielded military. Warden's theory demonstrated a decided interest in leadership with a qualified disinterest in fielded military personnel. Furthermore, "Warden assesses the leadership ring as the most critical ring, for it is 'the only element of the enemy that can make concessions, that can make the very complex decisions that are necessary to keep a country on a particular course, or that can direct a country at war.'"⁷ The logic is that without proper C2 and with enough destruction of vehicles, equipment and infrastructure, fielded military forces will give up, surrender or walk away. But, who will fill the leadership vacuum? What of the fielded military? Will they forgive and forget? This theory poses many questions for the JFC and presents significant obstacles regarding the post-war environment.

Warden's theory is often associated with "decapitation"—a subset of another targeting strategy called coercion. Robert Pape, airpower professor, scholar and author, defined coercion as, "...manipulating costs and benefits through efforts to change the behavior of a state in order to force a change of behavior."⁸ Perhaps in simpler terms, "Coercion will occur whenever a state must choose between making concessions or suffering the consequences of continuing its present course of action."⁹ Pape identifies four types of coercion: punishment, risk, decapitation and denial.¹⁰ Punishment and risk regard counter-civilian targeting strategies and will thus be disregarded in this paper. To gauge the ability of OIF targeting strategies and their relative leverage upon Iraqi will, the recent history of

decapitation and denial may be studied in terms of Operation Desert Storm (ODS) success.

Decapitation and denial had differing levels of success during ODS. John Warden's theory, in its ODS form, was dubbed the "decapitation strategy." Leadership and economic infrastructure targets were destroyed in a "thunderclap" of activity during the first 72 hours of ODS. Robert Pape detailed the early effectiveness of the decapitation strategy as follows:

"On 30 January Coalition commanders could confidently claim that twenty-six leadership targets had been struck and 60 percent severely damaged or destroyed, 75 percent of Iraq's command-and-control...facilities and most known biological and chemical facilities had been destroyed."¹¹

Therefore, the initial decapitation strategy appears to be a rousing operational success.

However, the bombing of leadership and regime targets dropped off significantly after the first week as the focus of these attacks turned principally to a maintenance level. This absence of pervasive air-strikes within Baghdad and central Iraq failed to make the regime feel the pinch of war. Therefore the decapitation strategy was moderately effective; successful in destruction of targets which had a synergistic effect to the overall campaign (e.g.; air superiority achieved on day two) but falling short of proving strategically decisive in and of itself. While the very premise of Warden's theory had been that Hussein's regime (and support for it) was his center of gravity, the denial campaign in the Kuwaiti Theater of Operations (KTO) proved otherwise.

The denial campaign in the KTO developed as a secondary focus area during ODS. F-111s refined the art of "tank-plinking" as a means of destroying stationary armor. The effect was a campaign which attrited the Iraqi's armor; their means. Consequent taxation on their will is evident by the tendency of many soldiers to sleep as far away from their tanks as possible. Under interrogation an Iraqi general reflected:

"During the Iran war, my tank was my friend because I could sleep in it and know I

was safe.... During this war my tank became my enemy....none of my troops would get near a tank at night because they just kept blowing up.”¹²

As a direct result of tank attrition, desertions rose dramatically. Manning shortages led to post vacancies and therefore a further depletion of means. Air attack was the principal cause for the desertions, clearly affecting morale and therefore will. B-52 strikes supplied further evidence of will-leveraging via usage of unguided general purpose munitions. Dropping these ‘dumb’ bombs on area targets of Iraqi troops in the open, B-52s were the instrument of airpower that surrendering Iraqis “...cited again and again as the most terrifying of those whose attacks they had to endure.”¹³ Clearly the attrition of Iraqi personnel, vehicles and equipment proved undeniably decisive in achieving operational and strategic goals. In the final analysis, Hussein was compelled to perform a rational calculus of his dwindling means and will. Saddam Hussein could not bear to watch the further depletion of his war machine and was thus coerced, principally by the denial strategy of airpower, into accepting terms for his unconditional withdrawal. Denial strategy, as well as decapitation, would metamorphose twelve years later during the OIF campaign of “Shock and Awe.”

SHOCK & AWE: PRECISION PRIMACY

The operational strategy for success in OIF was built upon the premise of “Shock and Awe.” The men credited with this theory, Harlan K. Ullman and James P. Wade, espoused that, “‘Shock and Awe’ is the application of military force of such magnitude, precision and swiftness that it stuns the enemy, breaks the will to resist and makes further resistance appear futile.”¹⁴ Further, Ullman and Wade’s central theory dictated, “total mastery achieved at extraordinary speed and across tactical, strategic and political levels will destroy the will to resist...the goal is to use our power with such compellance that even the strongest of wills will be awed.”¹⁵ This concept, also known as Rapid Dominance, “...blends John Boyd’s and

John Warden's theories of strategic paralysis with network-centric warfare concepts and the advances made in precision munitions to form its foundation.”¹⁶ The recurring theme in these definitions was to affect enemy will by operating at a rate and magnitude inside of their OODA loop via precision and technology. The major implication, and flaw, of the theory required an almost exclusive dedication to precision weaponry. Therefore, precision engagement and PGMs were directly intertwined with the desired “Shock and Awe” results. Conclusions may be drawn regarding the success of will-leveraging efforts in OIF upon understanding this primacy of PGMs.

Precision Engagement, and all the technology the name implies, is now a primary precept for conducting operational warfare. Joint Vision 2020 defines precision engagement as:

“...the ability of joint forces to locate, surveil, discern, and track objectives or targets; select, organize, and use the correct systems; generate desired effects; assess results; and reengage with decisive speed and overwhelming operational tempo as required, throughout the full range of military operations.”¹⁷

PGMs are the weapons embodiment of precision engagement. This definition from JV 2020 implies a great emphasis from the joint community in coming years. Their increased usage over the past two decades belied the increasing confidence JFCs have bestowed upon them. To be sure these weapons are worthy of this support. These smart weapons have redefined and revolutionized modern warfare. PGMs reduce collateral damage with corresponding lethality to opposing forces. The rise of PGMs is a recent development due to their stellar battlefield evolution.

PGMs have evolved over the past sixty years out of seemingly polar desires to increase accuracy and to decrease collateral damage. Today, PGMs epitomize the principle of war of mass. Instead of flying hundreds of aircraft against a single target, a JFC will enjoy

the same effects via a single strike air asset with a single bomb. After the successful completion of ODS, General Buster Glosson asserted, “Two raids of 300 B-17 bombers could not achieve with 3,000 bombs what two F-117s can do with only four. Precision weapons have truly given a new meaning to the term *mass*.”¹⁸ Finally, PGMs mitigate concerns over collateral damage. Operational commanders need to target their lethal operational fires to minimize noncombatant casualties. PGM strikes have become the tool of choice in the last decade—inherently less destructive than diplomatic tools like international sanctions:

“Not only have air strikes accounted for a tiny proportion of civilian wartime deaths, but recent technological advances in weaponry and intelligence have significantly reduced casualties among both attackers and attacked. Indeed, in comparison with the devastating impact on civilians of coercive mechanisms such as sanctions, modern air warfare stands out as an increasingly efficient, effective, and humane tool of foreign policy.”¹⁹

While this statement may be founded in truth, it is seldom recognized. Western ideals demand low to nonexistent casualty rates. Moreover, these expectations of low collateral damage belie a revulsion to unnecessary death which has become the expectation since ODS. During ODS buildup, CENTAF’s chief planner expressed the, “...constraints that Western sensibilities had placed on the conduct of an air campaign against Iraq by noting ‘...the American people would never stand for another Dresden.’”²⁰ The stunningly low loss of life in the ODS victory both heightened the usage and expectations of PGMs. In the ten year period from 1991-2001, PGM usage escalated in three consecutive major combat operations from 8 percent in ODS to 56 percent in Operation Enduring Freedom (OEF) (See Figure 1).²¹ In March 2003, OIF proved to be the ultimate example of primacy on precision engagement—increasing yet again the usage of PGMs to a 68 percent majority (See Figure 1).²²

OIF ANALYSIS

In light of the successful removal of Saddam Hussein's regime, "Shock and Awe" must have achieved the principal goal of OIF. However, detailed analysis testified to the fact that CENTCOM did not target effectively to meet the objective of a stable desired end state. If "Shock & Awe" targeting strategy successfully met all objectives, then it stands to reason that targeting would have been prioritized by 1) leadership and regime C2, 2) fielded military equipment and, 3) fielded military personnel. Analysis confirmed targeting emphasis upon the first two priorities while fielded forces were to be mitigated, avoided or "paralyzed." An overarching airpower study like the ODS "Gulf War Airpower Survey" has not been produced for OIF to date. Some analysis however does exist from which general facts may be gleaned. Before making judgments concerning OIF targeting efforts, a review of essential facts regarding mission types and their impact upon operational objectives is prudent.

Prior to OIF combat operations, leadership targeting reflected a planned 16 percent apportionment upon the operational objective of suppressing regime C2 ability (See Figure 2).²³ The execution figure weighed in close by comparison at 9 percent (See Figure 3).²⁴ Further evidence suggested that Time Sensitive Targeting (TST) with PGMs may have eventually had a hand in the regime collapse:

"Will leveraging is unclear, but (a) 7 Apr 2003 B-1 bomber attack in Baghdad...played a role in the rapid collapse of Saddam's regime. Evidence for that is on the 8th of April...the regime has collapsed—Baghdad Bob has stopped talking on TV and there appears to be little coordination or direction."²⁵

These facts are true to Warden's strategy that "...the center leadership ring is the source of the enemy's will and the true target of 'Shock and Awe'"²⁶ It also reflected an evident tenacity by the CENTCOM JFC to stay the course in prosecuting leadership targets.

However, if the lead priority were leadership targets, early data would seem to suggest a

level of disparate attention regarding fielded Iraqi military equipment. It is important to note that, while leadership targets were essentially fixed and few in number, Iraqi military equipment was both mobile and numerous.

Estimates of Iraqi order of battle numbers testified to extreme destruction during OIF. First, a 57 percent majority of Designated Mean Point of Impact (DMPI) nominations during the targeting process were to support Combined Forces Land Component Commander (CFLCC) operations (See Figure 2).²⁷ The operational objective of these nominations were, “...to achieve defeat or compel capitulation of Republican Guard forces & Iraqi Army and conduct SASO.”²⁸ In execution however, 79 percent of DMPIs struck were under the operational objective of Killbox Interdiction and Close Air Support (KI/CAS)—far exceeding the CFLCC executed percentage of 1 percent (See Figure 3).²⁹ Initial “guesstimates” from the Center for Strategic and International Studies (CSIS) ascertained that the near 80% focus of KI/CAS sorties had devastating results upon the Iraqi order of battle. Iraqi tanks were reduced by an estimated 81 percent; armored personnel carriers by 88 percent; artillery was attrited to 83 percent and helicopters were smashed by 93 percent (See Figure 4).³⁰ The statistics reflected the fact that the movement of Iraqi fielded forces led to a near total abort of pre-combat CFLCC apportioned target types. Essentially, all Combined Forces Air Component Commander (CFACC) pre-hostility plans were thrown out on day two. KI/CAS numbers indicated airpower was used in conjunction with blitzkrieg-like movement and maneuver. The resultant devastation upon the Iraqi order of battle is juxtaposed with the extremely low Iraqi combatant casualty rate of less than 2 percent.

Iraqi combatant fatality estimates during OIF major combat operations are listed between 1.4 and 1.8 percent.³¹ Given an Iraqi troop estimate of 389,000 total active military

personnel prior to OIF, this casualty assessment represented an exceptionally small fraction of Iraqi fielded forces.³² Furthermore, the Iraqi desertion rate in OIF was dramatically high, with some units reaching 90 percent in early April of 2003.³³ It is important to note that the high desertion rate suggested few Iraqi forces remained long enough to subject themselves to targeting; a testament to both psychological operations and ongoing bombing “examples” primarily within the Republican Guard. From these facts several observations may be made.

In light of the previous analysis, a correct allocation of force was utilized against leadership and C2 targets. An inordinate but necessarily greater targeting effort was executed upon vehicles, equipment and military hardware than upon leadership. Fielded personnel—whether intentional or not—received a woefully lacking level of destruction to achieve CENTCOM’s desired end state. Therefore, reasonable verification exists that the strategy of “Shock and Awe” primarily targeted Iraqi equipment as opposed to personnel. It is also a reasonable assertion, given the nature of PGMs, that they were utilized to destroy individual items of equipment; e.g., “tank-plinking.” Generally speaking, this focus of PGMs upon equipment in OIF certainly affected Iraqi will—not like an operational commander might have expected, however. PGM usage convinced Iraqi soldiers that resistance to such an asymmetrically superior adversary was futile and that their best course of action would be to desert or surrender and to take up arms in their own course of asymmetric warfare. If greater attrition were to be exacted upon Iraqi personnel, efforts needed to be focused upon them within the first several weeks. Mitigating the destruction of fielded personnel was a vital component of Warden’s “Five Rings” strategy and proved to be the Achilles’ heel of “Shock and Awe.” Effects-based targeting examples in OIF included, “...selectively bombing Iraqi regular army forces to paralyze or reduce their movement

rather than destroy them by attrition....”³⁴ A necessary and greater emphasis needed to be placed on the attrition of Iraqi fielded forces to ensure post-conflict stability.

“IN PRAISE OF ATTRITION”

The denial strategy of ODS was a prime example of attrition as an effective will-leveraging strategy in a limited war. In contrast, greater emphasis on attrition in OIF could have promoted a more stable peace at the end of major combat operations. Air interdiction in OIF indicated that only 5 percent of Iraqi units incurred attrition rates greater than 10 percent. Furthermore, another 15 percent took losses ranging between 1 and 10 percent. Together, this 20 percent of Iraqi fielded forces was chiefly comprised of Medina and Baghdad divisions as well as air defense and artillery units.³⁵ In fact, “...more than half the Iraqi deaths were concentrated in a handful of very unlucky (or very heroic) brigades and battalions. The rest would have learned—as the coalition intended—that it was better to quit than fight.”³⁶ The data presented a compelling argument that a small number of Iraqi units received the brunt of the Coalition’s interdiction efforts. The data also suggested that the Iraqi soldiers were coerced to quit rather than *truly* surrender—effectively living to fight another day. Furthermore, “Several Iraqi divisions were singled out for intense bombardment – notably the Medina and Baghdad Republican Guard divisions – both because of their pivotal position, blocking the approach to Baghdad, and as a demonstration to other Iraqi units....”³⁷ Selecting units for targeting to make an example of them reflected a hesitancy to bomb on a larger scale. Employing denial and attrition targeting strategies could have bred a more sedate post-war environment. Bombing, via both PGMs and unguided munitions, of troops in the open needed to be the rule rather than the exception. Further evidence supported the perception that CENTCOM’s efforts were designed to inculcate fear

exclusively on a localized scale:

“Moreover, with the attacks heavily focused on a minority of Iraqi units, they would have produced (and did produce) localized experiences of sudden and great devastation. This would have communicated throughout the force, both by word and by the fact of some units beginning to take flight, and could have had a cascading effect.”³⁸

Again, the point to reflect upon is not the validity of this tactic’s success, but to suggest that greater attrition and, therefore greater post-war stability could have been achieved via more destructive measures, to include wide-scale targeting of fielded forces.

Ralph Peters made this assertion in his article, “In Praise of Attrition.” He argues that attrition is both necessary and a prerequisite for operational success in war:

“The belief that attrition, as an objective or a result, is inherently negative is simply wrong. A soldier’s job is to kill the enemy. All else, however important it may appear at the moment, is secondary. And to kill the enemy is to attrit the enemy. All wars in which bullets—or arrows—fly are wars of attrition.”³⁹

The problem is that will-leveraging effects are historically more difficult to judge. Coercion efforts by any military method, particularly bombing, ultimately invite subjective analysis. Reams of quantitative data such as buildings destroyed, production decreases and lives lost may be cited while drawing various and alternative conclusions concerning the “will of the people.” By most accounts, Japan was devastated economically and militarily by the end of WWII. Daytime “precision” bombing dictated U.S. efforts to little effect in Japan until General Curtis Lemay undertook a firebombing campaign of hellish magnitude. In May of 1945 a month of raids reduced Japan’s six primary industrial cities: Tokyo, Nagoya, Kobe, Osaka, Yokohama, and Kawasaki “...to smoldering ruins in nine devastating 500-bomber assaults.”⁴⁰ The level of destruction accomplished by the firebombing campaign had devastating will-leveraging effects from November 1944 to the summer of 1945:

“Some 300,000 civilians were dead and another half a million suffering from burns,

wounds, or other painful injuries; more than 850,000 were homeless. Japan's economy was devastated, her industry shattered, transportation and communications networks ripped apart, and war production slashed to less than half of what it had been before the start of the bombing offensive. Yet far more significant was the impact of the air campaign on Japan's *will* to continue the war." (emphasis added)⁴¹

The final catalyst to Japan's unconditional withdrawal and capitulation were the twin atomic bombs on Hiroshima and Nagasaki on August 6th and 9th respectively. The bombs killed in excess of 100,000 Japanese citizens. Clearly, the mutual and supporting effects of the incendiary raids and atomic bombs crushed the warrior spirit of Japanese society.

The historical example of the bombing campaign of Japan would be an anachronism today. Moreover, such collateral damage and national devastation is rightly considered anathema. However, the Japanese people knew they were beaten and there is no substitute to ensure post-conflict peace than to break the will of your adversary. While the firebombings of Dresden and Tokyo exemplify extremes in will-leveraging, JFCs may heed the success of coercive strategy and focus it upon the military personnel of today's adversaries. Instead of the countercivilian strategies of yesteryear, tomorrow's JFC should employ the coercive strategy of denial against fielded and paramilitary forces with measured, yet ruthless control.

RECOMMENDATIONS

Anthony Cordesman wrote in the aftermath of OIF, "The US government and the US military need to make major improvements in the way they approach conflict termination.... In fact, this may be the most important single lesson of the Iraq War."⁴² This overarching observation bears fruits of wisdom for the JFC. Tomorrow's JFC may peel back this observation to reveal several deeper lessons learned from "Shock and Awe." Operational commanders need to 1) balance both their objectives focus as well as their selection of weapons for operational fires, 2) avoid the dual standard of modern warfare and, 3) realize

that attrition levels should reflect the type of war upon which they are engaged. These recommendations may help to ensure seamless transitions to future security and stability operations (SASO).

First and foremost, JFCs should target to meet all objectives with greater balance.

Philip Meilinger, an airpower author and advocate wrote:

“To reiterate: the military strategy must fulfill the political objectives desired; if they do not, then those military operations, regardless of how efficient, accurate, bloodless, and discriminate, are useless.”⁴³

Attention to all objectives, rather than arguably prioritized objectives, will yield a more seamless transition to SASO. Next, JFCs need to remember that destruction has a place in compellence. Rather than prosecuting targets with a naked PGM-centered zeal, operational commanders should target their adversaries using a greater balance of PGMs and dumb bombs to realize effects-based operations. Affording PGM usage primacy is only prudent if they acquire the desired effect. Moreover, JFCs should integrate the leveraging effects offered by “dumb” bombs. As was observed in ODS, these weapons can crush the spirit of enemy formations. Anthony Cordesman, a respected military scholar and writer for the Center for Strategic and International Studies, espoused the virtues of dumb bombs:

“Precision is not the solution to every problem, and the value of “dumb” weapons should not be ignored. This is particularly true when weapons have to be used against area targets for either killing or disruptive effect.”⁴⁴ Caution must be taken in more urban and delicate environments where collateral damage may be a factor.

Today’s JFC should be wary of the growing double standard in modern warfare. That double standard is a critical vulnerability which has developed since ODS and concurrently with PGM usage. Modern western ideals expect warfare to be waged in careful and

measured efforts, reducing enemy casualties as well as collateral damage. Meanwhile a less technologically savvy adversary may promote tactics such as encamping within mosques and hospitals or combining civilian shelters and C2 nodes. Anthony Cordesman observed that the Coalition in OIF:

”...had to fight in what in many ways was a dual standard: international expectations that casualties and collateral damage would be kept to a minimum, yet without similar expectations about the conduct of Saddam Hussein’s regime. It also had to operate in a climate where many of the interpretations of the laws of war called for both unilateral restraint and restraint to so great a degree that it could make military operations difficult to impossible.”⁴⁵

Modern warfare raises many legal and ethical issues which may compound problems for the JFC. Operational commanders and their legal staff representatives need to first separate western ideals from the laws of armed conflict (LOAC). When faced with legitimate targets laced with collateral damage concerns, JFCs must resist western ideals, avoid the “paralysis of analysis” and strike when justified. Such actions, with correspondingly aggressive media campaigns, will deny the adversary a primary propaganda tool and access to this critical vulnerability.

Finally, tomorrow’s JFC should always be aware of the type of war upon which they are about to embark and target the fielded forces accordingly to meet all objectives. Carl von Clausewitz stated, “No one starts a war - or rather, no one in his senses ought to do so – without first being clear in his mind what he intends to achieve by that war and how he intends to conduct it.”⁴⁶ It follows that limited objectives should merit limited denial and attrition strategies while unlimited objectives should receive greater effort. In a limited war, Warden’s principle of fielded military as a low targeting priority bears merit. In ODS for example, attrition achieved increased regional equality in the balance of power as well as to coerce Saddam Hussein to withdraw from Kuwait. Prior to OIF, Colin Powell was quoted as

saying, “You break it, you buy it.” His assertion deftly warns of the implications of overthrowing a regime and embarking upon what is effectively an occupation. Greater emphasis during OIF upon the fielded military would have paid dividends during conflict termination and SASO. Ruthless yet precisely controlled fires will ensure true and complete capitulation from future adversaries.

CONCLUSION

Evidence exists that former Iraqi regime loyalists infiltrated the ranks of militants in Iraq today. Iraq’s current intelligence chief, Major General Mohammed Abdullah al-Shahwani told a London-based newspaper, “...that the men, who are well organized and trained, include former Ba’ath Party members, Islamic militant groups, and unemployed former army members.”⁴⁷ CENTCOM Commander General Abizaid is focusing his attention on 34 former Ba’ath Party leaders whom he maintains are, “...financing and directing attacks against American troops and their allies.”⁴⁸ General Abizaid inherited grave security concerns in this volatile Iraqi environment because the OIF targeting strategy of “Shock and Awe” failed to target effectively to accomplish all objectives.

JFCs must apply the appropriate targeting strategy with equity and balance to accomplish each and every objective. With precision and technology as its primary enablers, “Shock and Awe” achieved the primary objective of Iraqi regime removal by successfully operating at a rapid rate and tempo inside of the enemy OODA loop. In terms of conflict termination however, this stunning military success overlooked the principle of war of *security*. Anthony Cordesman stated, “It is one of the iron laws of military history that armies are far better equipped to win the war than to win the peace....”⁴⁹ His assertion seems to be an ironclad truth in the tradition of American war. Furthermore, operational

commanders must use the appropriate weapons to ensure the proper effects are achieved.

Despite the current emphasis on precision engagement, the proclivity to use PGMs is only prudent so long as they remain the correct weapon to achieve the desired effect. PGMs have helped to foster today's environment in which the Western media promotes a dual standard in modern warfare. JFCs must not let casualty expectations hinder combat operations, lest they pull punches and let an obstinate enemy slip through their fingers. Finally, this dual standard of modern warfare coupled with Warden's strategy to avoid fielded forces twisted "Shock and Awe" into a conscious avoidance of enemy attrition. The evolutionary process of targeting strategies must not violate principles of war or otherwise be an impediment to success. The Global War on Terror (GWOT) may yet witness further major conflicts and tomorrow's JFC must learn well these lessons offered from OIF.

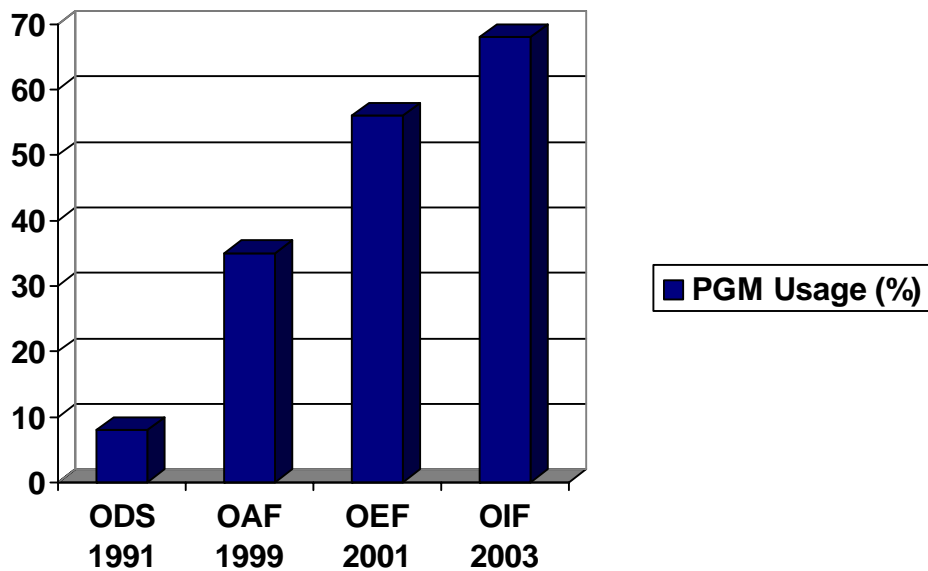
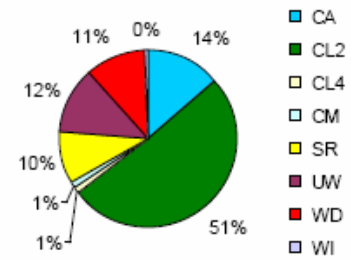


Figure 1- PGM Usage 1991-2003

CFACC APPROVED APPORTIONMENT

- Average Apportionment (by percentage)

CA	14.1%
CL2	50.7%
CL4	1.2%
CM	1.0%
HA	0.0%
JR	0.0%
SR	9.8%
SS	0.0%
UW	12.5%
WD	10.2%
WI	0.5%



GUIDANCE, APPORTIONMENT AND TARGETING

- Total DMPI Nominations 30,542

- By Operational Objective

CA	2,374
CL	17,521
CM	72
SR	4,782
UW	4,278
WD	1,515

- By Component Nominations

CFACC	6,918
CFLCC	17,613
CFMCC	132
CFSOCC	5,282
TF-20	1,850

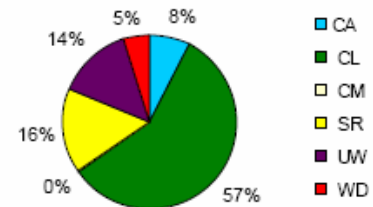
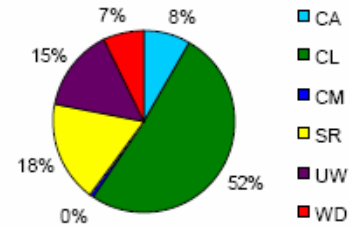


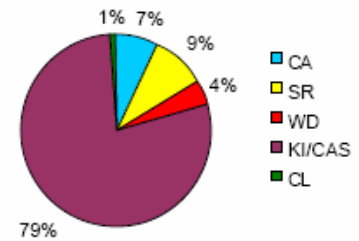
Figure 2 - OIF CFACC Apportioned Targeting (Planning Phase)

- Total DMPIs on JIPTL 25240
 - By Operational Objective
 - CA 2,124
 - CL 12,893
 - CM 113
 - SR 4,559
 - UW 3,711
 - WD 1,840



EXECUTION

- DMPIs Struck by Operational Objective **
 - CA 1,441
 - CL (Fixed) 234
 - SR 1,799
 - WD 832
 - KI/CAS DMPIs 15,592



* DMPI = Desired Mean Point of Impact

** UW and CM were included in CL or KI/CAS (Killbox Interdiction/Close Air Support)

Figure 3 - OIF CFACC Apportioned Targeting (Execution Phase)

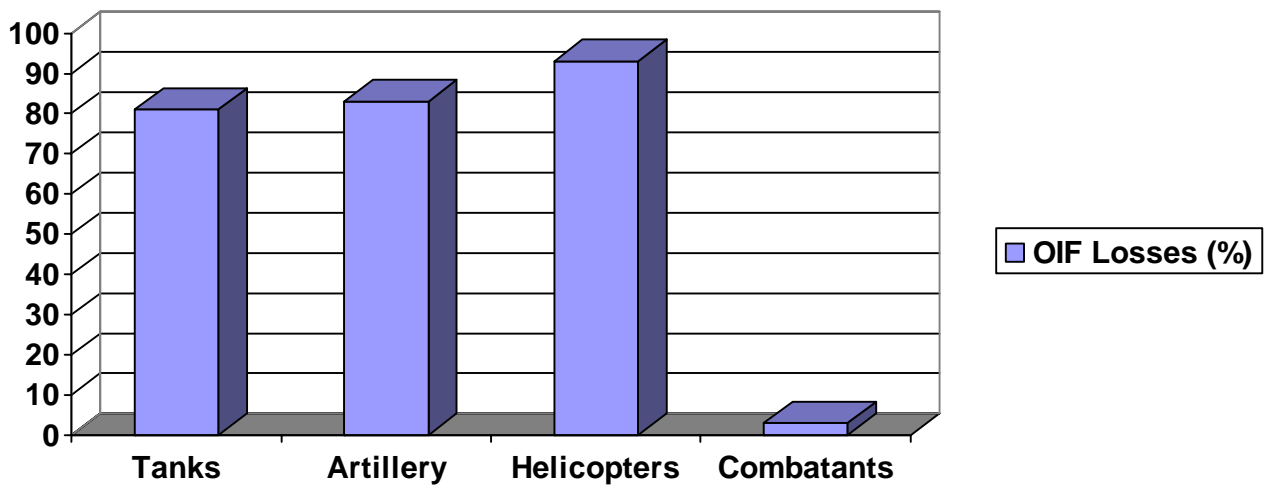


Figure 4 - Iraqi Order of Battle Losses⁵⁰

NOTES

-
- ¹ Maamoun Youssef, "Up to 30,000 Terrorists in Iraq, Intelligence Chief Says," The Boston Globe, 6 Jan 05, <<http://ebird.afis.osd.mil/ebfiles/e20050106344521.html>> [6 Jan 05].
- ² Baker Spring, "Operation Iraqi Freedom: Military Objectives Met," The Heritage Foundation, 18 Apr 03, <<http://www.heritage.org/Research/MiddleEast/wm261.cfm>> [7 Jan 05].
- ³ Jim Garamone, "Rumsfeld Lists Operation Iraqi Freedom Aims, Objectives," Air Force Link, 21 Mar 03, <<http://www.af.mil/news/story.asp?storyID=32403155>> [7 Jan 05].
- ⁴ Anthony H Cordesman, Iraq and Conflict Termination: The Road to Guerrilla War?, Washington DC: Center for Strategic and International Studies, 30 Jul 03, 15.
- ⁵ Frank Linkous, Shock & Awe: An Operational Art Critique, Newport, RI: U.S. Naval War College, 16 May 2003, 4. For simplicity purposes, this citation references multiple facts in this paragraph. All facts are found on page 4 of the source document.
- ⁶ Ibid.
- ⁷ Ibid.
- ⁸ James R Cody, Coercive Airpower in the Global War on Terror: Testing Validity of Courses of Action, Fort Leavenworth, KS: Army Command and General Staff College, 22 May 03, 9.
- ⁹ Ibid, 9-10.
- ¹⁰ Ibid, 10.
- ¹¹ Robert Pape, Bombing to Win, Ithaca: Cornell University Press, 1996, 229.
- ¹² Richard Hallion, "Precision Guided Munitions and the New Era of Warfare," Air Power History, Volume 43, Number 3 (Fall 1996): 13.
- ¹³ Williamson Murray, "Air War in the Gulf: The Limits of Air Power," in Selected Readings Part III, Volume 1, ed. by Strategy and Policy Department, (Newport, RI: U.S. Naval War College, August 2004), 36.
- ¹⁴ Linkous, 1.
- ¹⁵ Ibid, 2.
- ¹⁶ Ibid, 3.
- ¹⁷ Director for Strategic Plans and Policy, J5, Joint Vision 2020, (Washington D.C.: June 2000), 22.
- ¹⁸ David R. Mets, The Long Search for a Surgical Strike: Precision Munitions and the Revolution in Military Affairs, Maxwell AFB, AL: School of Advanced Airpower Studies, October 2001, 36.
- ¹⁹ Phillip S. Meilinger, "A Matter of Precision," Foreign Policy Journal, Spring 2001, <http://www.ciaonet.org/olj/fp/fp_marapr01mep01.html> [3 Dec 04].
- ²⁰ Murray, 34.
- ²¹ Anthony H Cordesman, Understanding the New "Effects-based" Air War in Iraq, Washington DC: Center for Strategic and International Studies, 15 Mar 03, 6.
- ²² CENTAF Assessment and Analysis Division, Operation Iraqi Freedom - By the Numbers, (Shaw AFB, SC: 30 April 03), 11.
- ²³ Ibid, 5.
- ²⁴ Ibid.
- ²⁵ David Lewis, "Air Power in the Gulf War," Lecture, U.S. Naval War College, Newport, RI: 12 Feb 04.
- ²⁶ Linkous, 4.
- ²⁷ CENTAF, 5.

-
- ²⁸ Ibid, 4.
- ²⁹ CENTAF, 5.
- ³⁰ Anthony H Cordesman, The Military Balance in the Middle East, Washington DC: Center for Strategic and International Studies, 23 Feb 04, 43.
- ³¹ Carl Conetta, "The Wages of War: Iraqi Combatant and Noncombatant Fatalities in the 2003 Conflict," Cambridge, MA: Commonwealth Institute, Project on Defense Alternatives Research Monograph #8, 20 Oct 03, 32.
- ³² Cordesman, The Military Balance in the Middle East, 43.
- ³³ Conetta, 30.
- ³⁴ Anthony H Cordesman, The Lessons of the Iraq War: Executive Summary, Washington DC: Center for Strategic and International Studies, 21 Jul 03, 195.
- ³⁵ Carl Conetta, "Catastrophic Interdiction: Air Power and the Collapse of the Iraqi Field Army in the 2003 War," Cambridge, MA: Commonwealth Institute, Project on Defense Alternatives Briefing Memo #30, 26 Sep 03, 8. For simplicity purposes, this citation references multiple figures in the previous lines. All figures are found on page 8 of the source document.
- ³⁶ Ibid.
- ³⁷ Ibid, 7.
- ³⁸ Ibid, 8.
- ³⁹ Ralph Peters, "In Praise of Attrition," Parameters, Summer 2004, <<http://carlisle-www.army.mil/usawc/Parameters/04summer/peters.htm>> [9 Jul 04].
- ⁴⁰ Stanley L. Falk, "A Nation Reduced to Ashes," in Airpower Studies, ed. by Sharon McBride, (Maxwell AFB, AL: U.S. Air Command and Staff College, July 2002), 184.
- ⁴¹ Ibid, 185.
- ⁴² Cordesman, Iraq and Conflict Termination: The Road to Guerrilla War?, 7.
- ⁴³ Phillip S. Meilinger, "The Future of Air Power: Observations from the Past Decade," Air Power Review, Volume 3, Number 1 (Spring 2000): 54.
- ⁴⁴ Cordesman, Lessons of the Iraq War: Executive Summary, 50.
- ⁴⁵ Ibid, 39.
- ⁴⁶ Carl von Clausewitz, On War, Princeton, NJ: Princeton University Press, 1984, 579.
- ⁴⁷ Youssef, 1.
- ⁴⁸ John Hendren, "Ex-Baathists Play Crucial Insurgent Role, U.S. Says," Los Angeles Times, 11 Jan 05, <<http://ebird.afis.osd.mil/ebfiles/e20050111345466.html>> [11 Jan 05].
- ⁴⁹ Cordesman, Iraq and Conflict Termination: The Road to Guerrilla War?, 7.
- ⁵⁰ Cordesman, The Military Balance in the Middle East, 43; Conetta, "The Wages of War: Iraqi Combatant and Noncombatant Fatalities in the 2003 Conflict," 32.

BIBLIOGRAPHY

- CENTAF Assessment and Analysis Division. Operation Iraqi Freedom - By the Numbers. (Shaw AFB, SC: 30 April 03).
- Clausewitz, Carl von. On War. Princeton, NJ: Princeton University Press, 1984.
- Cody, James R. Coercive Airpower in the Global War on Terror: Testing Validity of Courses of Action. Fort Leavenworth, KS: Army Command and General Staff College. 22 May 03.
- Conetta, Carl. "Catastrophic Interdiction: Air Power and the Collapse of the Iraqi Field Army in the 2003 War." Cambridge, MA: Commonwealth Institute. Project on Defense Alternatives Briefing Memo #30. 26 Sep 03.
- _____. "The Wages of War: Iraqi Combatant and Noncombatant Fatalities in the 2003 Conflict." Cambridge, MA: Commonwealth Institute. Project on Defense Alternatives Research Monograph #8. 20 Oct 03.
- Cordesman, Anthony H. Iraq and Conflict Termination: The Road to Guerrilla War?. Washington DC: Center for Strategic and International Studies. 30 Jul 03.
- _____. The Lessons of the Iraq War: Executive Summary. Washington DC: Center for Strategic and International Studies. 21 Jul 03.
- _____. The Military Balance in the Middle East. Washington DC: Center for Strategic and International Studies. 23 Feb 04.
- _____. Understanding the New "Effects-based" Air War in Iraq. Washington DC: Center for Strategic and International Studies. 15 Mar 03.
- Director for Strategic Plans and Policy, J5. Joint Vision 2020. Washington D.C.: June 2000.
- Falk, Stanley L. "A Nation Reduced to Ashes." in Airpower Studies, edited by Sharon McBride, 178-185. Maxwell AFB, AL: U.S. Air Command and Staff College, July 2002.
- Garamone, Jim. "Rumsfeld Lists Operation Iraqi Freedom Aims, Objectives," Air Force Link. 21 Mar 03. <<http://www.af.mil/news/story.asp?storyID=32403155>> [7 Jan 05].
- Hallion, Richard. "Precision Guided Munitions and the New Era of Warfare." Air Power History, Volume 43, Number 3 (Fall 1996): 4-19.
- Hendren, John. "Ex-Baathists Play Crucial Insurgent Role, U.S. Says." Los Angeles Times. 11 Jan 05. <<http://ebird.afis.osd.mil/ebfiles/e20050111345466.html>> [11 Jan 05].
- Lewis, David. "Air Power in the Gulf War." Lecture. U.S. Naval War College, Newport, RI: 12 Feb 04.
- Linkous, Frank. Shock & Awe: An Operational Art Critique. Newport, RI: U.S. Naval War College. 16 May 2003.

Meilinger, Phillip S. "The Future of Air Power: Observations from the Past Decade." Air Power Review, Volume 3, Number 1 (Spring 2000): 48-68.

_____. "A Matter of Precision." Foreign Policy Journal. Spring 2001.
<http://www.ciaonet.org/olj/fp/fp_marapr01mep01.html> [3 Dec 04].

Mets, David R. The Long Search for a Surgical Strike: Precision Munitions and the Revolution in Military Affairs. Maxwell AFB, AL: School of Advanced Airpower Studies. October 2001.

Murray, Williamson. "Air War in the Gulf: The Limits of Air Power." in Selected Readings Part III, Volume 1, edited by Strategy and Policy Department, 28-38. Newport, RI: U.S. Naval War College, August 2004.

Pape, Robert. Bombing to Win. Ithaca: Cornell University Press, 1996.

Peters, Ralph. "In Praise of Attrition." Parameters. Summer 2004. <<http://carlisle-www.army.mil/usawc/Parameters/04summer/peters.htm>> [9 Jul 04].

Spring, Baker. "Operation Iraqi Freedom: Military Objectives Met." The Heritage Foundation. 18 Apr 03.
<<http://www.heritage.org/Research/MiddleEast/wm261.cfm>> [7 Jan 05].

Youssef, Maamoun. "Up to 30,000 Terrorists in Iraq, Intelligence Chief Says." The Boston Globe. 6 Jan 05. <<http://ebird.afis.osd.mil/ebfiles/e20050106344521.html>> [6 Jan 05].